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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,478	12/17/2001	Jens Hamann	HAMANN-2	2801

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EXAMINER

LE, DANG D

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 12/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/022,478

Applicant(s)

HAMANN, JENS

Examiner

Dang D Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10-21 and 24 is/are rejected.
- 7) ☒ Claim(s) 8, 9, 22 and 23 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 6, 7, 10-19 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Ojima et al.

Regarding claim 1, Ojima et al. show in an arrangement of a plurality of electric machines (Figure 14), the electric machines are defined by axes in parallel relationship, wherein the electric machines include a common stator (Ac) which incorporates a plurality of stator portions that cooperate with rotors (2A-2D) insertable in the stator portions, wherein the number of rotors corresponds to the number of the axes of the electric machines.

Regarding claim 2, it is noted that Ojima et al. also show the stator being made by at least one construction selected from the group consisting of laminated structure and composite material structure.

Regarding claim 6, it is noted that Ojima et al. also show optimizing means for optimization of a magnetic field at overlap zones of magnetic fields of the arrangement (N vs. S, Figure 3b).

Regarding claim 7, it is noted that Ojima et al. also show the optimizing means optimizing magnetic fields between neighboring electric machines (Figure 3B).

Regarding claim 10, it is noted that Ojima et al. also show the optimizing means including flux barriers (5a, 5b).

Regarding claims 11 and 24, it is noted that Ojima et al. also show the flux barriers being realized by slits.

Regarding claim 12, it is noted that Ojima et al. also show the flux barriers being realized by non-magnetic material.

Regarding claim 13, it is noted that Ojima et al. also show the arrangement for use in machine tools.

Regarding claim 14, it is noted that Ojima et al. also show the machine tools being multi-spindle machines.

Regarding claim 15, it is noted that Ojima et al. also show a multiple electric machine system, comprising:

- A single stator (Ac) having a plurality of cutouts;
- A plurality of rotors (2A-2D), each of the rotors being disposed in a corresponding one of the cutouts, whereby the rotors and the cutouts are placed into one-to-one correspondence, to thereby realize a plurality of electric machines in side-by-side disposition with axes in parallel relationship.

Regarding claim 16, it is noted that Ojima et al. also show the cutouts being evenly spaced about a circumference of the stator so that the electric machines are disposed in a circular configuration.

Regarding claim 17, it is noted that Ojima et al. also show the cutouts being arranged next to one another in a linear alignment so as to realize a linear disposition of the electric machines (Figure 2).

Regarding claim 18, it is noted that Ojima et al. also show each of the cutouts of the stator being so configured as to be bounded about its circumference by spaced-apart slots for placement of windings.

Regarding claim 19, it is noted that Ojima et al. also show the stator being composed of a stack of laminations.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-5, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ojima et al. in view of Mowery, Jr.

Regarding claims 3 and 20, Ojima et al. show all of the limitations of the claimed invention except for cooling means for cooling at least parts of the arrangement.

Mowery, Jr. shows cooling means (24) for cooling at least parts of the arrangement for the purpose of reducing heat.

Since Ojima et al. and Mowery, Jr. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

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It would have been obvious at the time the invention was made to a person having ordinary skill in the art to include cooling means for cooling at least parts of the arrangement as taught by Mowery, Jr. for the purpose discussed above.

Regarding claims 4, 5 and 21, it is noted that Mowery, Jr. also show the cooling means including a cooling channel disposed centrally in the stator and the cooling means including a cooling jacket at least partially circumscribing the stator.

Allowable Subject Matter

5. Claims 8, 9, 22 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Information on How to Contact USPTO

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (703) 305-0156. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

DDL
December 24, 2002

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Sung Lh